

REMARKS

Claims 3, 4, 7 and 10-13 are pending in this application. By this Amendment, claims 1, 2, 5, 6, 8 and 9 are canceled, claims 3 and 10 are amended, and claims 11-13 are added. Support for amended claim 3 can be found, for example, on page 5, lines 13-21, page 6, line 19 - page 7, line 3, and page 7, lines 16-33 of the specification. Support for amended claim 10 can be found, for example, on page 10, lines 4-13 of the specification. Support for new claim 11 can be found, for example, on page 3, line 34 - page 4, line 1 of the specification. Support for new claim 12 can be found, for example, on page 7, lines 4-15 of the specification. Accordingly, no new matter is added. In view of at least the following remarks, reconsideration and allowance are respectfully requested.

Applicants note with appreciation the allowance of claims 4 and 7 within the Office Action. However, Applicants note that the Office Action's summary page asserts that claims 4 and 7 are objected to. Because there is no objection to claims 4 and 7 within the Office Action, Applicants presume that this assertion is in error.

Claims 1-3, 5, 6 and 8-10 are rejected under 35 U.S.C. §102(e) over Carroll, III et al. This rejection is respectfully traversed.

The cancellation of claims 1, 2, 5, 6, 8 and 9 render the rejection of these claims moot.

Regarding independent claim 3, Carroll does not disclose "a plurality of fuel injection members including a first fuel injection member disposed in a center of the fuel injection unit and an annular second fuel injection member surrounding the first fuel injection member, each of the fuel injection members having a port through which fuel is injected" (emphasis added).

In Carroll, the fuel in the fuel injector flows through delivery passages 25, 26 and 28 to orifices 30. For example, as disclosed in col. 5, lines 29-56, an inner needle valve element denoted by reference numeral 32 and an outer needle valve element denoted by reference numeral 34 are used for controlling fuel flow through injector orifice 30. Specifically, moving

the inner needle valve element (32) and the outer needle valve element (34) from closed positions to open positions permits fuel that is flowing through delivery passages 25, 26 and 28, to exit injector orifices 30. See, for example, col. 5, lines 29-56 and col. 7, line 52 - col. 8, line 4. Carroll further discloses that a separator denoted by reference numeral 46 is used as part of the injector control assembly to separate the inner needle valve element (32) and the outer needle valve element (34) while also creating a fluid seal. See, for example, col. 5, lines 49-56. Accordingly, the inner needle valve element (32) and the separator (46) only function to block the flow of fuel.

The Office Action relies on Carroll for allegedly disclosing a first fuel injection member (32) and a second fuel injection member (46). However, as discussed above and as shown in Figures 1 and 3 of Carroll, the alleged first fuel injection member (32) is a solid cylinder. This solid cylinder provides no means through which fuel can be injected. Accordingly, in this respect, the alleged injection member (32) of Carroll cannot be considered to have "a port through which fuel is injected," as recited in claim 3.

Regarding the alleged second fuel injection member (46), this piece comprises a cylinder having an aperture therethrough. See, for example, Figures 1, 3 and 4, and column 5, lines 49-56. The aperture is provided so that the alleged first fuel injection member (32) can be slid into the alleged second fuel injection member (46). See, for example, column 5, lines 49-56. Importantly, the member (32) fills the aperture of member (46). Thus, this configuration does not allow fuel to flow through the alleged second fuel injection member (46). That is, the fuel that resides above the alleged first fuel injection member (32), such as for example that shown in Figure 3, has no means through which to flow through the alleged second fuel injection member (46) because the aperture is blocked/filled by alleged first fuel injection member (32). Therefore the alleged fuel injection member (46) also cannot be considered to have "a port through which fuel is injected," as recited in claim 3.

Additionally, Carroll does not disclose annular air passages through which combustion air passes. As such, the fuel that is traveling through the needle injector assembly cannot thereby be "atomized and mixed with the combustion air flowing through the annular air passages," as recited in claim 3.

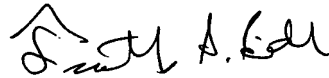
Because Carroll does not disclose all of the features recited in independent claim 3, claim 3 is patentable over Carroll. Claim 10 depends from independent claim 3, and thus is also patentable for the reasons discussed above, as well as for the additional features it recites. Withdrawal of the rejection is respectfully requested.

New claims 11-13 depend from independent claim 3, and thus are also patentable for the reasons discussed above, as well as for the additional features they recite.

In view of at least the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 3, 4, 7 and 10-13 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Timothy S. Smith
Registration No. 58,355

JAO:TSS/tbm

Attachment:
Petition for Extension of Time

Date: December 26, 2006

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
--